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Pediatrics 2004;114;1253-1257
DOI: 10.1542/peds.2003-1071-L

Screening for Domestic Violence in a General Pediatric Clinic: Be Prepared!

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ABSTRACT. *Objectives.* **Exposure to violence, particularly domestic violence (DV), negatively affects children's physical, emotional, and cognitive well-being. The American Academy of Pediatrics recommends routine DV screening of female caretakers of pediatric patients. Few reports of screening in pediatric practices exist, and none have reported outcomes from a resident-run urban academic center. We set out to determine whether the use of the Partner Violence Screen (PVS) increases detection of DV and to test the mechanics of implementing large-scale DV screening in a busy, pediatric residency training clinic.**

Methods. **Using the PVS, we screened a sample of consecutive female caretakers/guardians of children seen for pediatric care in the general pediatric clinic of Children's Hospital of Michigan from March 1, 2002, through February 28, 2003. Positive screens obtained during the study period were compared with the number of DV referrals received by the clinic social workers from January 1, 2001, through December 31, 2001, before PVS screening began. To test the mechanics of screening, we also analyzed the number of forms returned blank or marked "no opportunity to screen" in the last 8 months of the study period.**

Results. **In the 12 months before use of the PVS, our social work department received 9 referrals because of DV from the general pediatric clinic, among a total of 5446 caretakers/guardians bringing 6380 children for a total of 13 576 patient care visits. In contrast, the social work department received 164 referrals because of positive screening results among 5445 caretakers/guardians bringing 7429 children for 17 346 patient care visits in the 12-month study period after introduction of the PVS. Fourteen of 164 positive PVSs were found to involve nondomestic violence perpetrated by nonpartners or violence with the patient as the victim, not the mother or female caretaker. A total of 150 PVSs involved true DV. The difference in identification of DV with the PVS, compared with the rate before its introduction, was highly significant. The positive predictive value for the PVS was 91.5%, and the identified prevalence rate was 3.7%. In the last 8 months of the study period, 6301 of 8055 PVS forms (78%) were completed; 1754 of 8055 PVS forms (22%) were left blank, but it was not possible to determine whether these represented duplicate screening forms for instances in which the mother or female caretaker had brought >1 child for care.**

Conclusions. **Formal screening for DV with the PVS in this study setting of a busy, urban, academic, general pediatric clinic appeared to be very successful, in terms of increasing referrals and documentation of previously unrecognized DV situations. This increase signals the need for resources (time and/or social work services) to provide appropriate referral services. The PVS identifies nonpartner violence occasionally.** *Pediatrics* **2004;114: 1253–1257;** ***domestic violence, intimate partner violence, screening, pediatric, outpatient clinic.***

ABBREVIATIONS. DV, domestic violence; PVS, Partner Violence Screen.

Exposure to violence has a negative impact on children's physical, emotional, and cognitive well-being.[1] Domestic violence (DV) exposure has been shown to have adverse effects on youths in particular. Such children are at increased risk of physical abuse,[2,3] and their cognitive development and academic performance are frequently stunted.[4,5] They are more likely to have poor self-esteem and are at greater risk for later substance abuse.[6–9] They may also be more likely to engage in abusive behaviors with intimate partners once they reach adulthood, thereby perpetuating DV.[10,11]

In recognition of these problems, the American Academy of Pediatrics issued guidelines in 1998,[12] recommending that pediatricians screen for DV among all female caretakers of children presenting to their practices. Since then, however, only a few reports describing the results of such screening in pediatric settings have been published. One report described a study in an emergency department setting.[13] Studies that were completed in pediatric clinics were conducted for brief periods of time, sometimes as part of a larger study evaluating childhood behaviors.[14–17] Results of routine screening in a resident-run clinic within an urban academic hospital have not been reported. Our objectives were (1) to determine whether the use of the Partner Violence Screen (PVS) increases detection of DV and (2) to test the mechanics of implementing large-scale DV screening in a busy, pediatric, residency training clinic.

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Accepted for publication May 6, 2004.
doi:10.1542/peds.2003-1071-L
Presented in part at the Annual Meeting of the Ambulatory Pediatric Association, May 6, 2003, Seattle, Washington.

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METHODS

Design and Study Population

The study was conducted in the general pediatric clinic at Children's Hospital of Michigan between March 1, 2002, and February 28, 2003. The computer information system was reviewed at the end of the study, and it was found that, during this time period, 5445 caretakers presented 7429 children for 17 346 patient care visits. Eighty-five percent of the children were black, 4% white, 2% Hispanic, 6% biracial, and 3% of other or unknown racial background. Eighty percent were insured through Medicaid or the State Child Health Insurance Program. A sample of consecutive female caretakers/guardians seeking care for their children were screened for DV by medical assistants, nurses, or resident physicians, all of whom had been trained in the use of the PVS (Fig 1), as part of a larger intervention project for DV. Responses were recorded on a preprinted questionnaire that was attached to the encounter form during chart preparation. The PVS was considered positive if a respondent circled ≥1 answer in the first column, ie, yes to question 1, no to question 2, and/or yes to question 3. Women were excluded if they did not speak English or if other adults accompanied them. Because of previously published concerns about the sensitivity of the topic,[18] screening was performed in situations in which children ≥3 years of age were present only if the woman could be asked privately or the response form could be handed to her so that she could complete it herself. Women were informed that we routinely ask these questions of all of our families. Signs notifying families of the clinic's policy of asking about DV were posted in the waiting room and in the examination rooms. If the medical assistant was not able to administer the PVS, then residents and nurses attempted to do so later in the visit. A referral to the clinic social worker was made during that office visit for subjects with positive screening results. At the end of the visit, the response sheets were collected in a box near the nurse's station. To test the mechanics of screening, we also analyzed the number of forms returned blank or marked "no opportunity to screen" in the last 8 months of the study period. The protocol was approved by the Wayne State University Human Investigation Committee.

Positive screening results obtained during the study period were compared with the number of referrals for DV received by the clinic social workers from January 1, 2001, through December 31, 2001, before screening had been instituted. The computerized medical record system was reviewed to identify the numbers of families and children seen during this time period. Demographic features, numbers of families, and numbers of patient care visits were similar to those in the study time period (Table 1). On the basis of experience and the number of screens marked no opportunity, we estimated that 75% of children were accompanied by only their mothers or female caretakers for both time periods, and we therefore calculated the number of women screened as 75% of the total number of families seen.

Statistical Analyses

Descriptive statistics, including frequencies and proportions, were calculated. Data obtained from the PVS were compiled with SPSS software (SPSS, Chicago, IL). Nominal variables were created to determine the frequency of responses, with the categories of DV reported (positive), no DV reported (negative), no opportunity to screen, and blank screens. The positive predictive value of the PVS was calculated, and a χ^2 test comparing the DV detection rates in the 2 time periods was performed.

RESULTS

In the 12 months before the use of the PVS, our social work department received 9 referrals because of DV among a total of 5446 caretakers/guardians. In contrast, the social work department received 164 referrals because of positive screening results among 5445 caretakers/guardians in the 12-month study period after introduction of the PVS.

One hundred fifty PVSs involved true DV. The response patterns are listed in Table 2. The most common (32%) PVS response pattern was yes/yes/no, ie, the women had encountered violence within the past 12 months but felt safe in their current relationships and no one from a previous relationship was making them feel unsafe now.

Fourteen of 164 positive PVSs were found to involve nondomestic violence perpetrated by nonpartners or violence with the patient as victim, not the mother or female caretaker. Of these, 4 screens identified nonpartner violence occurring in the home. Eight positive PVSs identified nonpartner violence occurring outside the home. These cases most commonly represented community violence, such as an assault by an unrelated person. In 2 additional cases, women interpreted the PVS questions as referring to the child they had brought in for evaluation of sexual

PVS Questions

1. Have you been hit, kicked, punched, threatened or otherwise hurt by someone within the past year?

   Yes No
   If so, by whom?

   _____

2. Do you feel safe in your current relationship?

   No Yes

3. Is there a partner from a previous relationship who is making you feel unsafe now?

   Yes No

○ No opportunity ○ Left clinic/Not Seen ○ Answered Before-NEG

Fig 1. PVS.

TABLE 1. Demographic Description of General Pediatric Clinic Population

	Jan 1, 2001–Dec 31, 2001	Mar 1, 2002–Feb 28, 2003
No. of patient care visits	13 576	17 346
No. of children served	6380	7429
No. of families	5446	5445*
Race, %		
Black	85	85
White	4	4
Hispanic	2	2
Biracial	7	6
Other/unknown	2	3
Insurance, %		
Medicaid/SCHIP	79	80
Self-pay	11	11
Private insurance	10	9

SCHIP indicates State Child Health Insurance Program.
* Of these, 3190 were different families from those in 2001.

TABLE 2. PVS Response Patterns

	No.	%
Yes/no/no	17	11.3
Yes/yes/no	48	32.0
Yes/yes/yes	21	14.0
Yes/no/yes	4	2.7
No/no/no	4	2.7
No/no/yes	4	2.7
No/yes/yes	31	20.6
Missing ≥1 response	21	14.0
Total	150	100.0

abuse. With clarification, it was established that neither woman had experienced DV herself.

With the assumption that 75% of caretakers were women who presented without a male partner or other adults or older children present, the identified DV prevalence rate was 3.7% (150 of [75% of 5445], ie, 150 of 4084 subjects), with a positive predictive value of 91.5% (150 of 164 cases), during the year we used the PVS screen. In the year before we used the PVS, our known prevalence rate was 0.2% (9 of [75% of 5446], ie, 9 of 4085 subjects). The difference was highly statistically significant ($P < .0001$). The sensitivity and specificity of the PVS could not be calculated, because we did not have a standard measure with which to compare it.

During the 8-month period from July 1, 2002, through February 28, 2003, we monitored the total number of forms returned. There were 8055 forms returned, of which 78% (6301 of 8055 forms) had been completed. Of these, 100 demonstrated positive results, with 90 referring to true DV and 10 referring to other types of violence or having been filled out incorrectly because of misinterpretation of the questions. Approximately 25% of completed screens (1616 of 6301 screens) were marked no opportunity. Screeners had been asked to mark this box if older children or other adults accompanied the woman or if a male adult had brought the child. We therefore estimated that female caretakers could be screened in 75% of visits, and we used this number as the basis for calculating prevalence rates. Twenty-two percent of PVS forms (1754 of 8055 forms) were blank, but it was not possible to determine whether these forms represented duplicate screening forms for instances in which the mother or female caretaker had brought >1 child for care. It was also not possible to clarify which families had already been screened in a previous visit.

DISCUSSION

Attitudes and Practices

Our results showed that, when we performed routine screening in a pediatric practice, the number of identified cases of DV increased dramatically. In our first year of screening for DV with the PVS, we detected almost 17 times more DV cases than we had found in the previous year. Several studies have examined pediatricians' practices and attitudes about screening. A published national survey reported that only 5% of pediatricians and 8% of family practitioners stated that they routinely screen for intimate partner violence.[19] The use of an office protocol addressing DV screening and referral increased the chances that a given physician would screen for DV. Erickson et al[20] surveyed pediatricians and family practitioners with admitting privileges at Children's Hospital Medical Center in Cincinnati, Ohio, and found that only 8.5% routinely screened for DV. The majority thought that they needed more education, had no current office protocol, and had too little time or support staff. Sugg and Inui[21] studied 38 physicians, primarily family practitioners, and found that they expressed several concerns about screening, including fear of "opening Pandora's box," not considering the possibility of DV because of their close identification with their patients, fear of offending, feeling powerless to help, loss of control, and, most commonly, the tyranny of the time schedule. This latter point is a major concern when the workload suddenly increases because of a change in practices. Dowd et al[22] reported that both mothers and physicians interviewed in focus group settings stated the need for immediate resources once DV is identified. The presence of experienced social workers becomes a necessity, especially in an age when pediatricians are feeling increasingly pressured to decrease the time they spend with patients. Physicians with limited access to the services of a social worker may be understandably resistant to screening.

Prevalence

Our DV rate of 3.7% was in the lower part of the range of previously reported prevalence rates for other pediatric settings, ie, 3.2% to 16.5%.[14,15,17,23] Our lower rate might have been attributable to differences in who was screened, who did the screening, the screening setting, and our screening tool. The PVS does not focus on lifetime DV exposure but limits itself to the previous 12 months and past and current relationship safety. Also, we expect that some women refused to divulge their experience because of fear of losing their children or fear of their partner finding out, with exacerbation of the situation. This might have contributed to the relatively low rate.

Setting

We are not aware of any previous reports of routine screening in a resident-run clinic. In 1992, Wissow et al[24] reported on screening for family violence in a similar inner-city, hospital-based, pediatric residents' continuity clinic. However, the screening was not part of the routine clinic protocol. Also, the screening tool did not differentiate between DV and other forms of violence experienced in the family. Therefore, their prevalence rates cannot be compared with ours.

False-Positive PVSs

The PVS may occasionally identify violence by a nonpartner against the female caretaker. In our study, 8.5% of the screens referred to nonpartner violence. In a previous study in which the PVS was compared with 2 standard measures, namely, the Conflict Tactics Scale and the Index of Spouse Abuse, the sensitivity of the PVS was found to be 71.4% with respect to the former and 64.5% with respect to the latter, with specificities of 84.4% and 80.3%, respectively.[25] The positive predictive values were 63.4% and 51.3%, whereas the negative predictive values were 88.7% and 87.6%, respectively. Because we did not compare the PVS with a standard measure, we cannot comment on the sensitivity, specificity, or negative predictive value in our population. Our higher positive predictive value of 91.5% is most likely attributable to the clinic staff members learning to double-check whether a positive PVS truly referred to DV and correcting the PVS if it was found that the caretaker was not referring to intimate partner violence. Most false-positive PVS screens were reported in the first 7 months of the use of this tool.

Limitations

Our study design has several limitations, as follows. (1) The acceptance of screening by an inner-city, primarily black, parent group may differ from that by other groups, and our findings may not be applicable to other populations. (2) The mechanics of routine screening may vary with the size of the practice setting or the degree of reliance on residents. The use of medical assistants for screening may not be practical where medical assistants have close personal contact with a larger proportion of the clientele, as may happen in a smaller community. (3) Without individually monitoring every clinic staff member completing screening, it was not possible to determine actual compliance with the screening protocol. In a pediatric clinic setting, concerns exist with respect to privacy of information about a mother's DV experience documented in her child's medical record, to which the father may have access. Therefore, a systematic chart review was not possible.

CONCLUSIONS

This study strongly suggests that screening, as recommended by the American Academy of Pediatrics, increases detection of DV. We showed, with a relatively large population, that such screening may be a very effective pediatric and public health intervention. Physicians may be called on to find increased resources of time and/or social work services to provide appropriate referral services. The PVS detects nonpartner violence occasionally. Confidentiality issues limiting the appropriateness of documenting a mother's DV experience in her child's chart can hamper efforts to retrospectively monitor full compliance with a DV screening protocol in a pediatric practice setting. Additional research is needed to develop simple but effective management protocols that allow practitioners to deal with the large number of newly identified cases they are likely to encounter once they begin routine screening.

ACKNOWLEDGMENTS

This study was funded by the Blue Cross Blue Shield of Michigan Foundation and the Children's Research Center of Michigan.

REFERENCES

1. Kashani JH, Daniel AE, Dandoy AC, Holcomb WR. Family violence: impact on children. *J Am Acad Child Adolesc Psychiatry.* 1992;31:181–189
2. Ross SM. Risk of physical abuse to children of spouse abusing parents. *Child Abuse Negl.* 1996;20:589–598
3. Rumm PD, Cummings P, Krauss MR, Bell MA, Rivara FP. Identified spouse abuse as a risk factor for child abuse. *Child Abuse Negl.* 2000;24:1375–1381
4. Fantuzzo JW, Mohr WK. Prevalence and effects of child exposure to domestic violence. *Future Child.* 1999;9:21–32
5. Delaney-Black V, Covington C, Ondersma SJ, et al. Violence exposure, trauma, and IQ and/or reading deficits among urban children. *Arch Pediatr Adolesc Med.* 2002;156:280–285
6. Hughes HM. Psychological and behavioral correlates of family violence in child witnesses and victims. *Am J Orthopsychiatry.* 1988;58:77–90
7. Green CR, Flowe-Valencia H, Rosenblum L, Tait AR. The role of childhood and adulthood abuse among women presenting for chronic pain management. *Clin J Pain.* 2001;17:359–364
8. Dube SR, Anda RF, Felitti VJ, Chapman DP, Williamson DF, Giles WH. Childhood abuse, household dysfunction, and the risk of attempted suicide throughout the life span: findings from the Adverse Childhood Experiences Study. *JAMA.* 2001;286:3089–3096
9. Anda RF, Croft JB, Felitti VJ, et al. Adverse childhood experiences and smoking during adolescence and adulthood. *JAMA.* 1999;282:1652–1658
10. McBurnett K, Kerckhoff C, Capasso L, et al. Antisocial personality, substance abuse, and exposure to parental violence in males referred for domestic violence. *Violence Vict.* 2001;16:491–506
11. Wolfe DA, Korsch B. Witnessing domestic violence during childhood and adolescence: implication for pediatric practice. *Pediatrics.* 1994;94:594–599
12. American Academy of Pediatrics, Committee on Child Abuse and Neglect. The role of the pediatrician in recognizing and intervening on behalf of abused women. *Pediatrics.* 1998;101:1091–1092
13. Duffy SJ, McGrath ME, Becker BM, Linakis JG. Mothers with histories of domestic violence in a pediatric emergency department. *Pediatrics.* 1999;103:1007–1013
14. Siegel RM, Hill TD, Henderson VA, Ernst HM, Boat BW. Screening for domestic violence in the community pediatric setting. *Pediatrics.* 1999;104:874–877
15. Parkinson GW, Adams RC, Emerling FG. Maternal domestic violence screening in an office-based pediatric practice. *Pediatrics.* 2001;108(3). Available at: www.pediatrics.org/cgi/content/full/108/3/e43
16. Knight RA, Remington PL. Training internal medicine residents to screen for domestic violence. *J Womens Health Gend Based Med.* 2000;9:167–174
17. Kerker BD, Horwitz SM, Leventhal JM, Plichta S, Leaf PJ. Identification of violence in the home: pediatric and parental reports. *Arch Pediatr Adolesc Med.* 2000;154:457–462
18. Zink T. Should children be in the room when the mother is screened for partner violence? *J Fam Pract.* 2000;49:130–136
19. Borowsky IW, Ireland M. Parental screening for intimate partner violence by pediatricians and family physicians. *Pediatrics.* 2002;110:509–516

20. Erickson MJ, Hill TD, Siegel RM. Barriers to domestic violence screening in the pediatric setting. *Pediatrics.* 2001;108:98–102
21. Sugg NK, Inui T. Primary care physicians' response to domestic violence: opening Pandora's box. *JAMA.* 1992;267:3157–3160
22. Dowd MD, Kennedy C, Knapp JF, Stallbaumer-Rouyer J. Mothers' and health care providers' perspectives on screening for intimate partner violence in a pediatric emergency department. *Arch Pediatr Adolesc Med.* 2002;156:794–799
23. Martin SL, Mackie L, Kupper LL, Buescher PA, Moracco KE. Physical abuse of women before, during, and after pregnancy. *JAMA.* 2001;285:1581–1584
24. Wissow LS, Wilson ME, Roter D, Larson S, Berman HI. Family violence and the evaluation of behavioral concerns in a pediatric primary care clinic. *Med Care.* 1992;30(suppl):MS150–MS165
25. Feldhaus KM, Koziol-McLain J, Amsbury HL, Norton IM, Lowenstein SR, Abbott JT. Accuracy of 3 brief screening questions for detecting partner violence in the emergency department. *JAMA.* 1997;277:1357–1361

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Postrel V. *New York Times*. September 9, 2004

Noted by JFL, MD